

Safety data sheet

This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878,
without any country-specific legislation



Advanced Paint Technology

TV 80
Hardener for PE



Printing: 08/02/2023

Date of compilation: 14/04/2016

Revised: 06/12/2022

Version: 15 (Replaced 14)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: TV 80
Hardener for PE
-

Other means of identification:

Non-applicable

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Relevant uses: Catalyst for unsaturated polyesters. For industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

PaintTECH Advanced Paint Technology
Bernsteinstrasse 130
70619 STUTTGART - GERMANY
Phone: +49 711 7653016 - Fax: +49 711 7654592

1.4 Emergency telephone number: +49 711 7653016

SECTION 2: HAZARDS IDENTIFICATION **

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Acute Tox. 3: Acute inhalation toxicity, Category 3, H331

Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302

Aquatic Chronic 3: Hazardous to the aquatic environment, long-term hazard, Category 3, H412

Carc. 2: Carcinogenicity, Category 2, H351

Eye Dam. 1: Serious eye damage, Category 1, H318

Flam. Liq. 2: Flammable liquids, Category 2, H225

Muta. 2: Germ cell mutagenicity, Category 2, H341

Org. Perox. D: Organic peroxides, Category D, H242

Skin Corr. 1B: Skin corrosion, Category 1B, H314

Skin Sens. 1: Sensitisation, skin, Category 1, H317

STOT SE 2: Specific target organ toxicity — single exposure, Hazard Category 2, H371

STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Danger



Hazard statements:

Acute Tox. 3: H331 - Toxic if inhaled.

Acute Tox. 4: H302 - Harmful if swallowed.

Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.

Carc. 2: H351 - Suspected of causing cancer.

Flam. Liq. 2: H225 - Highly flammable liquid and vapour.

Muta. 2: H341 - Suspected of causing genetic defects.

Org. Perox. D: H242 - Heating may cause a fire.

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

STOT SE 2: H371 - May cause damage to organs.

STOT SE 3: H335 - May cause respiratory irritation.

Precautionary statements:

**** Changes with regards to the previous version**

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SECTION 2: HAZARDS IDENTIFICATION ** (continued)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313: IF exposed or concerned: Get medical advice/attention.

Supplementary information:

EUH066: Repeated exposure may cause skin dryness or cracking.

Substances that contribute to the classification

Reaction mass of butane-2,2-diyl dihydroperoxide and dioxidibutane-2,2-diyl dihydroperoxide; tert-butyl hydroperoxide; methanol; Hydrogen peroxide solution

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

Endocrine-disrupting properties: The product fails to meet the criteria.

** Changes with regards to the previous version

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Peroxide/s

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification		Concentration
CAS: 1338-23-4 EC: 700-954-4 Index: Non-applicable REACH: 01-2119514691-43-XXXX	Reaction mass of butane-2,2-diyl dihydroperoxide and dioxidibutane-2,2-diyl dihydroperoxide⁽¹⁾ Self-classified		10 - <25 %
	Regulation 1272/2008	Acute Tox. 4: H302+H332; Eye Dam. 1: H318; Org. Perox. D: H242; Skin Corr. 1B: H314 - Danger	
CAS: 75-91-2 EC: 200-915-7 Index: 617-023-00-2 REACH: 01-2119446670-40-XXXX	tert-butyl hydroperoxide⁽¹⁾ Self-classified		10 - <25 %
	Regulation 1272/2008	Acute Tox. 2: H330; Acute Tox. 3: H311; Acute Tox. 4: H302; Aquatic Chronic 2: H411; Carc. 2: H351; Eye Dam. 1: H318; Flam. Liq. 3: H226; Muta. 2: H341; Org. Perox. F: H242; Skin Corr. 1C: H314; Skin Sens. 1: H317 - Danger	
CAS: 141-78-6 EC: 205-500-4 Index: 607-022-00-5 REACH: 01-2119475103-46-XXXX	Ethyl acetate⁽¹⁾ ATP CLP00		10 - <25 %
	Regulation 1272/2008	Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	
CAS: 79-20-9 EC: 201-185-2 Index: 607-021-00-X REACH: 01-2119459211-47-XXXX	methyl acetate⁽¹⁾ ATP CLP00		2,5 - <10 %
	Regulation 1272/2008	Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	
CAS: 67-56-1 EC: 200-659-6 Index: 603-001-00-X REACH: 01-2119433307-44-XXXX	methanol⁽¹⁾ ATP CLP00		2,5 - <10 %
	Regulation 1272/2008	Acute Tox. 3: H301+H311+H331; Flam. Liq. 2: H225; STOT SE 1: H370 - Danger	
CAS: 7722-84-1 EC: 231-765-0 Index: 008-003-00-9 REACH: 01-2119485845-22-XXXX	Hydrogen peroxide solution⁽¹⁾ Self-classified		2,5 - <10 %
	Regulation 1272/2008	Acute Tox. 4: H302+H332; Aquatic Chronic 3: H412; Eye Dam. 1: H318; Ox. Liq. 1: H271; Skin Corr. 1A: H314; STOT SE 3: H335 - Danger	

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

⁽²⁾ Substance with a Union workplace exposure limit

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Identification	Chemical name/Classification		Concentration
CAS: 78-93-3 EC: 201-159-0 Index: 606-002-00-3 REACH: 01-2119457290-43-XXXX	Butanone⁽¹⁾ ATP CLP00		1 - <2,5 %
	Regulation 1272/2008	Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	
CAS: 102-82-9 EC: 203-058-7 Index: Non-applicable REACH: 01-2119474898-14-XXXX	Tributylamine⁽¹⁾ Self-classified		<1 %
	Regulation 1272/2008	Acute Tox. 1: H330; Acute Tox. 2: H310; Acute Tox. 4: H302; Skin Irrit. 2: H315 - Danger	
CAS: 109-99-9 EC: 203-726-8 Index: 603-025-00-0 REACH: 01-2119444314-46-XXXX	tetrahydrofuran⁽²⁾ ATP ATP03		<1 %
	Regulation 1272/2008	Carc. 2: H351; Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H335; EUH019 - Danger	
CAS: 115-10-6 EC: 204-065-8 Index: 603-019-00-8 REACH: 01-2119472128-37-XXXX	Dimethyl ether⁽²⁾ ATP CLP00		<1 %
	Regulation 1272/2008	Flam. Gas 1A: H220; Press. Gas: H280 - Danger	

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

⁽²⁾ Substance with a Union workplace exposure limit

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Other information:

Identification	Specific concentration limit
Reaction mass of butane-2,2-diyl dihydroperoxide and dioxidibutane-2,2-diyl dihydroperoxide CAS: 1338-23-4 EC: 700-954-4	% (w/w) >=5: Org. Perox. D - H242
tert-butyl hydroperoxide CAS: 75-91-2 EC: 200-915-7	% (w/w) >=79: Org. Perox. C - H242 72<= % (w/w) <79: Org. Perox. E - H242 1<= % (w/w) <72: Org. Perox. F - H242 % (w/w) >=1: Eye Dam. 1 - H318 1<= % (w/w) <1: Eye Irrit. 2 - H319 % (w/w) >=0,1: Skin Sens. 1 - H317 % (w/w) >=5: STOT SE 3 - H335
methanol CAS: 67-56-1 EC: 200-659-6	% (w/w) >=10: STOT SE 1 - H370 3<= % (w/w) <10: STOT SE 2 - H371
Hydrogen peroxide solution CAS: 7722-84-1 EC: 231-765-0	% (w/w) >=70: Ox. Liq. 1 - H271 50<= % (w/w) <70: Ox. Liq. 2 - H272 % (w/w) >=70: Skin Corr. 1A - H314 50<= % (w/w) <70: Skin Corr. 1B - H314 35<= % (w/w) <50: Skin Irrit. 2 - H315 % (w/w) >=8: Eye Dam. 1 - H318 5<= % (w/w) <8: Eye Irrit. 2 - H319 % (w/w) >=35: STOT SE 3 - H335 % (w/w) >=63: Aquatic Chronic 3 - H412
tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	% (w/w) >=25: Eye Irrit. 2 - H319 % (w/w) >=25: STOT SE 3 - H335

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

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SECTION 4: FIRST AID MEASURES (continued)

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Keep the person affected at rest.

4.2 Most important symptoms and effects, both acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂).

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

AVOID ANY KIND OF HEATING. Devices and systems must comply with the essential safety and health requirements and, with the minimum requirements for improving the health and safety protection of workers. Consult section 10 for conditions and materials that should be avoided. KEEP ONLY IN ORIGINAL CONTAINER.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 5 °C

Maximum Temp.: 40 °C

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	IOELV (8h)	200 ppm	734 mg/m ³
	IOELV (STEL)	400 ppm	1468 mg/m ³
methanol CAS: 67-56-1 EC: 200-659-6	IOELV (8h)	200 ppm	260 mg/m ³
	IOELV (STEL)		
Butanone CAS: 78-93-3 EC: 201-159-0	IOELV (8h)	200 ppm	600 mg/m ³
	IOELV (STEL)	300 ppm	900 mg/m ³
tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	IOELV (8h)	50 ppm	150 mg/m ³
	IOELV (STEL)	100 ppm	300 mg/m ³

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification		Occupational exposure limits		
Dimethyl ether CAS: 115-10-6 EC: 204-065-8		IOELV (8h)	1000 ppm	1920 mg/m ³
		IOELV (STEL)		

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Reaction mass of butane-2,2-diyl dihydroperoxide and dioxidybutane-2,2-diyl dihydroperoxide CAS: 1338-23-4 EC: 700-954-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	3 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	5,288 mg/m ³	Non-applicable
tert-butyl hydroperoxide CAS: 75-91-2 EC: 200-915-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	12,5 mg/kg	Non-applicable
	Inhalation	10,37 mg/m ³	21,34 mg/m ³	3,08 mg/m ³	3,69 mg/m ³
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	63 mg/kg	Non-applicable
	Inhalation	1468 mg/m ³	1468 mg/m ³	734 mg/m ³	734 mg/m ³
methyl acetate CAS: 79-20-9 EC: 201-185-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	43 mg/kg	Non-applicable
	Inhalation	3777 mg/m ³	Non-applicable	300 mg/m ³	620 mg/m ³
methanol CAS: 67-56-1 EC: 200-659-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	20 mg/kg	Non-applicable	20 mg/kg	Non-applicable
	Inhalation	130 mg/m ³	130 mg/m ³	130 mg/m ³	130 mg/m ³
Hydrogen peroxide solution CAS: 7722-84-1 EC: 231-765-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	3 mg/m ³	Non-applicable	1,4 mg/m ³
Butanone CAS: 78-93-3 EC: 201-159-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1161 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	600 mg/m ³	Non-applicable
Tributylamine CAS: 102-82-9 EC: 203-058-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	15,2 mg/m ³	15,2 mg/m ³	15,2 mg/m ³
tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	12,6 mg/kg	Non-applicable
	Inhalation	96 mg/m ³	300 mg/m ³	72,4 mg/m ³	150 mg/m ³
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1894 mg/m ³	Non-applicable

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Reaction mass of butane-2,2-diyl dihydroperoxide and dioxidybutane-2,2-diyl dihydroperoxide CAS: 1338-23-4 EC: 700-954-4	Oral	Non-applicable	Non-applicable	0,75 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1,125 mg/m ³	Non-applicable
tert-butyl hydroperoxide CAS: 75-91-2 EC: 200-915-7	Oral	Non-applicable	Non-applicable	0,26 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	7,5 mg/kg	Non-applicable
	Inhalation	3,22 mg/m ³	12,81 mg/m ³	0,91 mg/m ³	0,75 mg/m ³

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	Oral	Non-applicable	Non-applicable	4,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	37 mg/kg	Non-applicable
	Inhalation	734 mg/m ³	734 mg/m ³	367 mg/m ³	367 mg/m ³
methyl acetate CAS: 79-20-9 EC: 201-185-2	Oral	203 mg/kg	Non-applicable	21,5 mg/kg	Non-applicable
	Dermal	203 mg/kg	Non-applicable	21,5 mg/kg	Non-applicable
	Inhalation	3777 mg/m ³	Non-applicable	64 mg/m ³	133 mg/m ³
methanol CAS: 67-56-1 EC: 200-659-6	Oral	4 mg/kg	Non-applicable	4 mg/kg	Non-applicable
	Dermal	4 mg/kg	Non-applicable	4 mg/kg	Non-applicable
	Inhalation	26 mg/m ³	26 mg/m ³	26 mg/m ³	26 mg/m ³
Hydrogen peroxide solution CAS: 7722-84-1 EC: 231-765-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	1,93 mg/m ³	Non-applicable	0,21 mg/m ³
Butanone CAS: 78-93-3 EC: 201-159-0	Oral	Non-applicable	Non-applicable	31 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	412 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	106 mg/m ³	Non-applicable
tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	Oral	Non-applicable	Non-applicable	1,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1,5 mg/kg	Non-applicable
	Inhalation	52 mg/m ³	150 mg/m ³	13 mg/m ³	75 mg/m ³
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	471 mg/m ³	Non-applicable

PNEC:

Identification				
Reaction mass of butane-2,2-diyl dihydroperoxide and dioxidibutane-2,2-diyl dihydroperoxide CAS: 1338-23-4 EC: 700-954-4	STP	1,2 mg/L	Fresh water	0,006 mg/L
	Soil	0,014 mg/kg	Marine water	0,001 mg/L
	Intermittent	0,056 mg/L	Sediment (Fresh water)	0,088 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,009 mg/kg
tert-butyl hydroperoxide CAS: 75-91-2 EC: 200-915-7	STP	0,17 mg/L	Fresh water	0,002 mg/L
	Soil	0,166 mg/kg	Marine water	0 mg/L
	Intermittent	0,015 mg/L	Sediment (Fresh water)	0,006 mg/kg
	Oral	0,0014 g/kg	Sediment (Marine water)	0,001 mg/kg
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	STP	650 mg/L	Fresh water	0,24 mg/L
	Soil	0,148 mg/kg	Marine water	0,024 mg/L
	Intermittent	1,65 mg/L	Sediment (Fresh water)	1,15 mg/kg
	Oral	0,2 g/kg	Sediment (Marine water)	0,115 mg/kg
methanol CAS: 67-56-1 EC: 200-659-6	STP	100 mg/L	Fresh water	20,8 mg/L
	Soil	100 mg/kg	Marine water	2,08 mg/L
	Intermittent	1540 mg/L	Sediment (Fresh water)	77 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	7,7 mg/kg
Hydrogen peroxide solution CAS: 7722-84-1 EC: 231-765-0	STP	4,66 mg/L	Fresh water	0,013 mg/L
	Soil	0,002 mg/kg	Marine water	0,013 mg/L
	Intermittent	0,014 mg/L	Sediment (Fresh water)	0,047 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,047 mg/kg
Butanone CAS: 78-93-3 EC: 201-159-0	STP	709 mg/L	Fresh water	55,8 mg/L
	Soil	22,5 mg/kg	Marine water	55,8 mg/L
	Intermittent	55,8 mg/L	Sediment (Fresh water)	284,74 mg/kg
	Oral	1 g/kg	Sediment (Marine water)	284,7 mg/kg

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
Tributylamine CAS: 102-82-9 EC: 203-058-7	STP	100 mg/L	Fresh water	0,008 mg/L
	Soil	7,17 mg/kg	Marine water	0,0008 mg/L
	Intermittent	0,08 mg/L	Sediment (Fresh water)	35,85 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	3,59 mg/kg
tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	STP	4,6 mg/L	Fresh water	4,32 mg/L
	Soil	2,13 mg/kg	Marine water	0,432 mg/L
	Intermittent	21,6 mg/L	Sediment (Fresh water)	23,3 mg/kg
	Oral	0,067 g/kg	Sediment (Marine water)	2,33 mg/kg
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	STP	160 mg/L	Fresh water	0,155 mg/L
	Soil	0,045 mg/kg	Marine water	0,016 mg/L
	Intermittent	1,549 mg/L	Sediment (Fresh water)	0,681 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,069 mg/kg

8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have CE marking in accordance with Directive 2016/425/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory respiratory tract protection	Filter mask for gases and vapours	CAT III	EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory hand protection	NON-disposable chemical protective gloves	CAT III	EN ISO 374-1:2016+A1:2018 EN 16523-1:2015+A1:2018 EN ISO 21420:2020	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory face protection	Face shield	CAT II	EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties	 CAT III	EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties	 CAT III	EN ISO 13287:2020 EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	33,28 % weight
V.O.C. density at 20 °C:	348,28 kg/m ³ (348,28 g/L)
Average carbon number:	3,54
Average molecular weight:	79,88 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Not available
Colour:	Characteristic
Odour:	Not available
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	125 °C
Vapour pressure at 20 °C:	5404 Pa
Vapour pressure at 50 °C:	21518,55 Pa (21,52 kPa)
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	1046,5 kg/m ³
Relative density at 20 °C:	1,046

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Dynamic viscosity at 20 °C:	2,01 cP
Kinematic viscosity at 20 °C:	1,92 mm²/s
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *

Flammability:

Flash Point:	9 °C
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	204 °C
Lower flammability limit:	Not available
Upper flammability limit:	Not available

Particle characteristics:

Median equivalent diameter:	Non-applicable
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9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Non-applicable *
Oxidising properties:	H242 Heating may cause a fire.
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) of flammable components:	Non-applicable *

Other safety characteristics:

Surface tension at 20 °C:	Non-applicable *
Refraction index:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Heating may cause a fire or explosion	Avoid direct impact	Not applicable

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SECTION 10: STABILITY AND REACTIVITY (continued)

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Avoid direct impact	Avoid alkalines, heavy metals, reducing agents, peroxide accelerating agents

10.6 Hazardous decomposition products:

May form explosive peroxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

Contains glycols. It is recommended not to breathe the vapours for prolonged periods of time due to the possibility of effects that are hazardous to the health .

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B- Inhalation (acute effect):

- Acute toxicity : Inhalation after prolonged exposure may be lethal.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- Contact with the eyes: Produces serious eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
- Mutagenicity: Exposure to this product can cause genetic modifications. For more specific information on the possible health effects see section 2.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Repeated exposure may cause skin dryness or cracking

H- Aspiration hazard:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
tert-butyl hydroperoxide CAS: 75-91-2 EC: 200-915-7	LD50 oral	560 mg/kg	Rat
	LD50 dermal	440 mg/kg	Rabbit
	LC50 inhalation	0,5 mg/L (ATEi)	
Reaction mass of butane-2,2-diyl dihydroperoxide and dioxidibutane-2,2-diyl dihydroperoxide CAS: 1338-23-4 EC: 700-954-4	LD50 oral	1017 mg/kg	Rat
	LD50 dermal	4000 mg/kg	Rabbit
	LC50 inhalation	11 mg/L (ATEi)	
Tributylamine CAS: 102-82-9 EC: 203-058-7	LD50 oral	420 mg/kg	Rat
	LD50 dermal	195 mg/kg	Rabbit
	LC50 inhalation	0,05 mg/L (ATEi)	
Hydrogen peroxide solution CAS: 7722-84-1 EC: 231-765-0	LD50 oral	1193 mg/kg	Rat
	LD50 dermal	4060 mg/kg	Rat
	LC50 inhalation	11 mg/L (4 h)	Rat
Butanone CAS: 78-93-3 EC: 201-159-0	LD50 oral	4000 mg/kg	Rat
	LD50 dermal	6400 mg/kg	Rabbit
	LC50 inhalation	23,5 mg/L (4 h)	Rat
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	LD50 oral	4100 mg/kg	Rat
	LD50 dermal	20000 mg/kg	Rabbit
	LC50 inhalation	>20 mg/L	
methanol CAS: 67-56-1 EC: 200-659-6	LD50 oral	100 mg/kg	
	LD50 dermal	300 mg/kg	
	LC50 inhalation	3 mg/L (4 h)	Rat
methyl acetate CAS: 79-20-9 EC: 201-185-2	LD50 oral	6482 mg/kg	Rat
	LD50 dermal	18684 mg/kg	Guinean pig
	LC50 inhalation	75 mg/L (4 h)	Rabbit
tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	LD50 oral	>5000 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L	
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	308,5 mg/L (4 h)	Rat

Acute Toxicity Estimate (ATE mix):

ATE mix		Ingredient(s) of unknown toxicity
Oral	1256,2 mg/kg (Calculation method)	0 %
Dermal	2670,58 mg/kg (Calculation method)	0 %
Inhalation	3,43 mg/L (4 h) (Calculation method)	0 %

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product fails to meet the criteria.

Other information

Non-applicable

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SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

Acute toxicity:

Identification	Concentration	Species	Genus
tert-butyl hydroperoxide	LC50 30 mg/L (96 h)	Pimephales promelas	Fish
CAS: 75-91-2	EC50 14 mg/L (48 h)	Daphnia magna	Crustacean
EC: 200-915-7	EC50 1,5 mg/L (72 h)	Selenastrum capricornutum	Algae
Ethyl acetate	LC50 230 mg/L (96 h)	Pimephales promelas	Fish
CAS: 141-78-6	EC50 717 mg/L (48 h)	Daphnia magna	Crustacean
EC: 205-500-4	EC50 3300 mg/L (48 h)	Scenedesmus subspicatus	Algae
methyl acetate	LC50 320 mg/L (96 h)	Pimephales promelas	Fish
CAS: 79-20-9	EC50 1026,7 mg/L (48 h)	Daphnia magna	Crustacean
EC: 201-185-2	EC50 120 mg/L (72 h)	Scenedesmus subspicatus	Algae
methanol	LC50 15400 mg/L (96 h)	Lepomis macrochirus	Fish
CAS: 67-56-1	EC50 12000 mg/L (96 h)	Nitrocris spinipes	Crustacean
EC: 200-659-6	EC50 530 mg/L (168 h)	Microcystis aeruginosa	Algae
Hydrogen peroxide solution	LC50 16,4 mg/L (96 h)	Pimephales promelas	Fish
CAS: 7722-84-1	EC50 7,7 mg/L (24 h)	Daphnia magna	Crustacean
EC: 231-765-0	EC50 2,5 mg/L (72 h)	Chlorella vulgaris	Algae
Butanone	LC50 3220 mg/L (96 h)	Pimephales promelas	Fish
CAS: 78-93-3	EC50 5091 mg/L (48 h)	Daphnia magna	Crustacean
EC: 201-159-0	EC50 4300 mg/L (168 h)	Scenedesmus quadricauda	Algae
Tributylamine	LC50 18,3 mg/L (96 h)	Oryzias latipes	Fish
CAS: 102-82-9	EC50 8 mg/L (48 h)	Daphnia magna	Crustacean
EC: 203-058-7	EC50 Non-applicable		
tetrahydrofuran	LC50 2160 mg/L (96 h)	Pimephales promelas	Fish
CAS: 109-99-9	EC50 Non-applicable		
EC: 203-726-8	EC50 Non-applicable		

Chronic toxicity:

Identification	Concentration	Species	Genus
Ethyl acetate	NOEC 9,65 mg/L	Pimephales promelas	Fish
CAS: 141-78-6 EC: 205-500-4	NOEC 2,4 mg/L	Daphnia magna	Crustacean
methanol	NOEC 15800 mg/L	Oryzias latipes	Fish
CAS: 67-56-1 EC: 200-659-6	NOEC 122 mg/L	Daphnia magna	Crustacean
tetrahydrofuran	NOEC 216 mg/L	Pimephales promelas	Fish
CAS: 109-99-9 EC: 203-726-8	NOEC Non-applicable		

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability	Biodegradability
tert-butyl hydroperoxide	BOD5 Non-applicable	Concentration 100 mg/L
CAS: 75-91-2	COD Non-applicable	Period 28 days
EC: 200-915-7	BOD5/COD Non-applicable	% Biodegradable 0 %
Ethyl acetate	BOD5 1,36 g O2/g	Concentration 100 mg/L
CAS: 141-78-6	COD 1,69 g O2/g	Period 14 days
EC: 205-500-4	BOD5/COD 0,8	% Biodegradable 83 %
methyl acetate	BOD5 Non-applicable	Concentration 100 mg/L
CAS: 79-20-9	COD Non-applicable	Period 14 days
EC: 201-185-2	BOD5/COD Non-applicable	% Biodegradable 92 %

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Identification	Degradability		Biodegradability	
methanol CAS: 67-56-1 EC: 200-659-6	BOD5	Non-applicable	Concentration	100 mg/L
	COD	1,42 g O2/g	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	92 %
Butanone CAS: 78-93-3 EC: 201-159-0	BOD5	2,03 g O2/g	Concentration	Non-applicable
	COD	2,31 g O2/g	Period	20 days
	BOD5/COD	0,88	% Biodegradable	89 %
Tributylamine CAS: 102-82-9 EC: 203-058-7	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	Non-applicable
	BOD5/COD	Non-applicable	% Biodegradable	80 %
tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	100 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
tert-butyl hydroperoxide CAS: 75-91-2 EC: 200-915-7	BCF	3
	Pow Log	0.7
	Potential	Low
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	BCF	30
	Pow Log	0.73
	Potential	Moderate
methyl acetate CAS: 79-20-9 EC: 201-185-2	BCF	0.8
	Pow Log	0.18
	Potential	Low
methanol CAS: 67-56-1 EC: 200-659-6	BCF	3
	Pow Log	-0.77
	Potential	Low
Butanone CAS: 78-93-3 EC: 201-159-0	BCF	3
	Pow Log	0.29
	Potential	Low
Tributylamine CAS: 102-82-9 EC: 203-058-7	BCF	39
	Pow Log	3.3
	Potential	Moderate
tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	BCF	3
	Pow Log	0.46
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
tert-butyl hydroperoxide CAS: 75-91-2 EC: 200-915-7	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,098E-2 N/m (25 °C)	Moist soil	Non-applicable
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	Koc	59	Henry	13,58 Pa·m³/mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	2,324E-2 N/m (25 °C)	Moist soil	Yes
methyl acetate CAS: 79-20-9 EC: 201-185-2	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,454E-2 N/m (25 °C)	Moist soil	Non-applicable

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Identification	Absorption/desorption		Volatility	
methanol CAS: 67-56-1 EC: 200-659-6	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,355E-2 N/m (25 °C)	Moist soil	Non-applicable
Hydrogen peroxide solution CAS: 7722-84-1 EC: 231-765-0	Koc	Non-applicable	Henry	7,5E-4 Pa·m ³ /mol
	Conclusion	Non-applicable	Dry soil	No
	Surface tension	Non-applicable	Moist soil	No
Butanone CAS: 78-93-3 EC: 201-159-0	Koc	30	Henry	5,77 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	2,396E-2 N/m (25 °C)	Moist soil	Yes
Tributylamine CAS: 102-82-9 EC: 203-058-7	Koc	46993	Henry	6,11E-3 Pa·m ³ /mol
	Conclusion		Dry soil	No
	Surface tension	2,44E-2 N/m (25 °C)	Moist soil	No
tetrahydrofuran CAS: 109-99-9 EC: 203-726-8	Koc	23	Henry	7,19 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	2,498E-2 N/m (25 °C)	Moist soil	Yes
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	1,136E-2 N/m (25 °C)	Moist soil	Non-applicable

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product fails to meet the criteria.

12.7 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances	Dangerous

Type of waste (Regulation (EU) No 1357/2014):

HP14 Ecotoxic, HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP7 Carcinogenic, HP11 Mutagenic, HP13 Sensitising, HP8 Corrosive

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2021 and RID 2021:

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SECTION 14: TRANSPORT INFORMATION (continued)



14.1 UN number or ID number: UN3105

14.2 UN proper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID (Reaction mass of butane-2,2-diyl dihydroperoxide and dioxydibutane-2,2-diyl dihydroperoxide)

14.3 Transport hazard class(es): 5.2
Labels: 5.2, 8

14.4 Packing group: N/A

14.5 Environmental hazards: No

14.6 Special precautions for user
Special regulations: 122, 274
Tunnel restriction code: D
Physico-Chemical properties: see section 9
Limited quantities: 125 mL

14.7 Maritime transport in bulk according to IMO instruments: Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:



14.1 UN number or ID number: UN3105

14.2 UN proper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID (Reaction mass of butane-2,2-diyl dihydroperoxide and dioxydibutane-2,2-diyl dihydroperoxide)

14.3 Transport hazard class(es): 5.2
Labels: 5.2, 8

14.4 Packing group: N/A

14.5 Marine pollutant: No

14.6 Special precautions for user
Special regulations: 122, 274
EmS Codes:
Physico-Chemical properties: see section 9
Limited quantities: 125 mL
Segregation group: Non-applicable

14.7 Maritime transport in bulk according to IMO instruments: Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:



14.1 UN number or ID number: UN3105

14.2 UN proper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID (Reaction mass of butane-2,2-diyl dihydroperoxide and dioxydibutane-2,2-diyl dihydroperoxide)

14.3 Transport hazard class(es): 5.2
Labels: 5.2, 8

14.4 Packing group: N/A

14.5 Environmental hazards: No

14.6 Special precautions for user
Physico-Chemical properties: see section 9
14.7 Maritime transport in bulk according to IMO instruments: Non-applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

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SECTION 15: REGULATORY INFORMATION (continued)

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Hydrogen peroxide solution (Product-type 1, 2, 3, 4, 5, 11, 12)

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
H2	ACUTE TOXIC	50	200
P5c	FLAMMABLE LIQUIDS	5000	50000
P6b	SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES	50	200

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors: Contains Hydrogen peroxide solution. Product under the provisions of Article 9. However, products that contain explosives precursors only to such a small extent and in such complex mixtures that the extraction of the explosives precursors is technically extremely difficult should be excluded from the scope of this Regulation.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION **

Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):

- Hazard statements

Texts of the legislative phrases mentioned in section 2:

- H314: Causes severe skin burns and eye damage.
- H318: Causes serious eye damage.
- H317: May cause an allergic skin reaction.
- H341: Suspected of causing genetic defects.
- H351: Suspected of causing cancer.
- H412: Harmful to aquatic life with long lasting effects.
- H242: Heating may cause a fire.
- H335: May cause respiratory irritation.
- H371: May cause damage to organs.
- H302: Harmful if swallowed.
- H331: Toxic if inhaled.
- H225: Highly flammable liquid and vapour.

** Changes with regards to the previous version

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SECTION 16: OTHER INFORMATION ** (continued)

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Acute Tox. 1: H330 - Fatal if inhaled.
Acute Tox. 2: H310 - Fatal in contact with skin.
Acute Tox. 2: H330 - Fatal if inhaled.
Acute Tox. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.
Acute Tox. 3: H311 - Toxic in contact with skin.
Acute Tox. 4: H302 - Harmful if swallowed.
Acute Tox. 4: H302+H332 - Harmful if swallowed or if inhaled.
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
Carc. 2: H351 - Suspected of causing cancer.
Eye Dam. 1: H318 - Causes serious eye damage.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Flam. Gas 1A: H220 - Extremely flammable gas.
Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
Flam. Liq. 3: H226 - Flammable liquid and vapour.
Muta. 2: H341 - Suspected of causing genetic defects.
Org. Perox. D: H242 - Heating may cause a fire.
Org. Perox. F: H242 - Heating may cause a fire.
Ox. Liq. 1: H271 - May cause fire or explosion, strong oxidiser.
Press. Gas: H280 - Contains gas under pressure, may explode if heated.
Skin Corr. 1A: H314 - Causes severe skin burns and eye damage.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
Skin Corr. 1C: H314 - Causes severe skin burns and eye damage.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
STOT SE 1: H370 - Causes damage to organs.
STOT SE 3: H335 - May cause respiratory irritation.
STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:

Skin Corr. 1B: Calculation method
Eye Dam. 1: Calculation method
Skin Sens. 1: Calculation method
Muta. 2: Calculation method
Carc. 2: Calculation method
Aquatic Chronic 3: Calculation method
STOT SE 3: Calculation method
STOT SE 2: Calculation method
Acute Tox. 4: Calculation method
Acute Tox. 3: Calculation method
Flam. Liq. 2: Calculation method (2.6.4.3)

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>
<http://eur-lex.europa.eu>

Abbreviations and acronyms:

** Changes with regards to the previous version

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SECTION 16: OTHER INFORMATION ** (continued)

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

*** Changes with regards to the previous version*

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -